

Action Summary – 19 September 2022

Analyst Theodore R. O'Neill *is initiating coverage of Cyngn Inc. with a Buy rating and a \$10 price target*

- **We are initiating coverage of Cyngn Inc. with a Buy rating and a \$10 price target.** CYN has the technology and intellectual property to capitalize on industrial needs for automation.
- **>\$100B opportunity as market forces including rising labor costs and worker shortfall, create windfall opportunity to turn the labor-intensive, industrial vehicle market autonomous.** With its partners, Cyngn is uniquely positioned to capture a share of the industrial autonomous vehicle market. Key factors driving this are Cyngn's technology and experience, labor shortages, lagging technological advancements from incumbents, growth in eCommerce, and growth of warehousing and logistics.
- **Ease of regulatory environment at industrial sites.** Industrial sites are typically rigid environments with consistent standards as opposed to city streets that have more variable environmental and situational conditions and diverse regulations. These differences make the proliferation of industrial AVs in private settings achievable with less time and resources than AVs on public roadways.
- **Proven autonomous vehicle (AV) technology with protected IP.** CYN has developed proprietary and patented AV technology with scalable prototype deployments on nine different vehicle form factors, including multiple deployments at customer sites.
- **eCommerce growth is changing the business model.** eCommerce is increasing the need for Industrial AV of all kinds.
- **Attractive Valuation.** Based on our discounted future earnings model, the value of all future earnings is \$10/share. Compared to peers, if current out-year multiples of sales, holds into 2024, it would also support our price target.

9/16 Closing price: \$1.16 USD	Market cap: \$40 million	Multiple of book: NMF	EV/2023 Sales: NMF
Diluted shares outstanding: 34 million	Insider ownership: 57%	3-mo avg. daily trading volume: >1,000,000	Dividend/Yield: NA/NA

GAAP estimates (EPS in USD – Revenue in USD millions)

Period	EPS	Revenue	Op Margin
1Q21A	(\$1.63)	\$0.00	
2Q21A	(\$2.20)	\$0.00	
3Q21A	(\$2.17)	\$0.00	
4Q21A	<u>(\$0.10)</u>	<u>\$0.00</u>	
FY21A	<u>(\$1.33)</u>	<u>\$0.00</u>	<u>NMF</u>
1Q22A	(\$0.14)	\$0.00	
2Q22A	(\$0.15)	\$0.00	
3Q22E	(\$0.25)	\$0.00	
4Q22E	<u>(\$0.26)</u>	<u>\$0.00</u>	
FY22E	<u>(\$0.81)</u>	<u>\$0.00</u>	<u>NMF</u>
1Q23E	(\$0.26)	\$0.00	
2Q23E	(\$0.20)	\$0.00	
3Q23E	(\$0.21)	\$0.00	
4Q23E	<u>(\$0.21)</u>	<u>\$0.00</u>	
FY23E	<u>(\$0.88)</u>	<u>\$0.00</u>	<u>NMF</u>

Note: Numbers may not add due to rounding. See our full model at the back of this report.

Cash balance (in USD millions)

• 2020A	• \$6,056
• 2021A	• \$21,946
• 2022E	• \$18,711
• 2023E	• \$3,618
• 2024E	• \$10,687

Debt (in USD millions)

• 2020A	• \$0.00
• 2021A	• \$0.00
• 2022E	• \$0.00
• 2023E	• \$0.00
• 2024E	• \$0.00

Risks/Valuation

- Risks: emerging technology, limited commercial development, new business model and potentially competitive markets
- Our \$10 price target is derived from our discounted future earnings model

Company description: Cyngn is an autonomous vehicle technology company focused on addressing industrial uses for autonomous vehicles. Cyngn believes that technological innovation is needed to enable the adoption of autonomous industrial vehicles that will

address the substantial industry challenges that exist today. These challenges include labor shortages, lagging technological advancements from incumbents, and high upfront investment requirements.

Figure 1 – Cyngn Inc. – One-Year Trading snapshot



Source: FactSet

Investment Thesis

>\$100B opportunity as market forces including rising labor costs and worker shortfall, create windfall opportunity to turn the labor-intensive, industrial vehicle market autonomous.

Industrial vehicles are vehicles generally used in manufacturing, e-commerce industries, etc. for material handling and transportation of raw materials, semi-finished products, and finished products. These vehicles are used to load and unload everything from raw materials to finished goods in warehouses, distribution centers, factories, etc.

In the company literature and its investor presentations it features, what is known as a “stockchaser” or “stock chaser”: (see Figure 2). Both terms appear to be equally used. These are common industrial vehicles and the company’s current flagship industrial vehicle that takes Cyngn’s solution to market. Figure 2 shows a driver operated stockchaser made by its partner, Columbia Vehicle Group. It has deployed its own autonomous version of the Columbia stockchaser (see Figure 3) at multiple customer sites through pilot deployments with varying stages of maturity. The company has a phased plan in place to develop vehicle-agnostic autonomous vehicle capability starting with the stockchaser and stepping up into more and more industrial vehicles such as a “Payloader” (see Figure 4) which can carry two tons and tow up to nine tons.

Figure 2 – Cyngn Inc. – Columbia Stockchaser in typical use



Source: Columbia Vehicle Group, Inc. website

Figure 3 – Cyngn Inc. – Cyngn’s Autonomous Stockchaser



Source: Cyngn Inc.

Figure 4 – Cyngn Inc. – Columbia Payloader



Source: Columbia Vehicle Group Inc. website

The issue for companies that employ industrial vehicles is labor, not the equipment itself, which is universally available as new or used equipment worldwide. Assuming your firm can find labor, our estimate of the cost to operate a single industrial vehicle for two shifts is ~\$125K/year (see Figure 5). For three shifts, the cost becomes ~\$187K/year. At three shifts operating six days/week, the labor cost is ~\$225K/year.

Figure 5 – Cyngn Inc. – Industrial Vehicle Labor Costs/Year

Cost per hour of labor	\$30.00
Shift/day	2.00
Paid hours per shift	8.00
Days/Week	5.00
Weeks/year	52.00
Cost of labor per unit of Industrial Vehicle	\$124,800.00

Source: Litchfield Hills Research and Zippia.com for per hour costs.

Clearly, making industrial vehicles autonomous can provide considerable savings, but applied to the whole market, it is a >\$100B opportunity. According to the company, that cites an ABI Research Whitepaper, there were ~883k material handling industrial vehicles sold in 2019. Using our cost of labor from Figure 5, the addressable global labor market is >\$110B/year.

Ripe for automation and transformation

Industrial vehicles are a mature market and essentially unchanged for decades. We believe this has been an overlooked opportunity. While much has been done to address autonomous vehicles like cars and trucks, industrial vehicles have been largely overlooked, until now.

Economics of industrial AV is multi-faceted.

In its presentation to investors, CYN focuses on the financial benefit to its customers in the money it saves by not having to pay for employees to drive stock chasers, but we believe that is only part of the economic benefit and it may not be the main one. We believe the main economic driver behind interest in industrial AV is that **there are no employees to hire!** There is a massive shortage of workers at the level required to operate industrial vehicles. Having industrial AV may mean the difference between getting the job done or not at all. Another economic benefit to its customers is that as industrial AV is added, it allows for factory design improvements that would never have happened in a non-AV setting. In an AV factory, planning does not have to include the risk of injury, thus processes can be streamlined, sped up or made mind-numbingly repetitive.

Ease of regulatory environment at industrial sites

While the AV industry as a whole will face stringent regulatory headwinds, Cyngn is targeting the industrial markets. Industrial sites are typically rigid environments with consistent standards as opposed to city streets that have more variable environmental and situational conditions and diverse regulations. These differences in operational design domains (ODD) will be major factors that make the proliferation of industrial AVs in private settings achievable with less time and resources than AVs on public roadways. Namely, safety and infrastructure challenges are cited as roadblocks that have delayed AVs from operating on public roadways at scale. Cyngn's focus on industrial AVs simplifies these challenges because industrial facilities (especially those belonging to a single end customer that operates similarly at different sites) share much more in common than different cities do. Furthermore, the Company's end customers own their infrastructure and can make changes more easily than governments can on public roadways.

Proven autonomous vehicle (AV) technology with protected IP

Cyngn's has developed a suite of technologies and tools called Enterprise Autonomy Suite (EAS), which has three complementary components (see Figure 6):

- DriveMod - modular industrial vehicle autonomous driving software;
- Cyngn Insight - customer-facing tool suite for monitoring and managing AV fleets (including remotely operating vehicles) and aggregating/analyzing data; and
- Cyngn Evolve - internal tool suite and infrastructure that facilitates artificial intelligence (AI) and machine learning (ML) training to continuously enhance its algorithms and models and provides a simulation framework (both record/rerun and synthetic scenario creation) to ensure that data collected in the field can be applied to validating new releases.

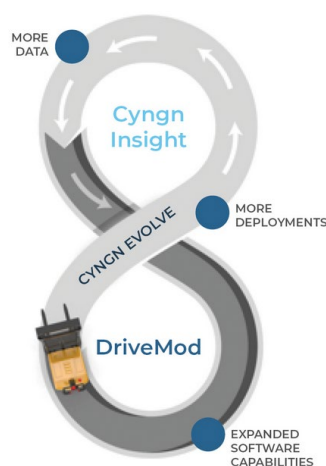
Figure 6 – Cyngn Inc. -The core components of EAS



Source: Company presentation

EAS combines core autonomous vehicle technology with a suite of tools and products that strengthen the ties between industrial business operations and the positive network effects that underpin the relationship between data and AVs. In short, EAS software is built to evolve and to provide continuous improvement with each new over-the-air software update, thanks to embedded collection and analysis of data assets that lead to improved workflows and algorithms (see Figure 7).

Figure 7 – Cyngn Inc.- Continuous Improvement Cycle



Source: Company presentation

Cyngn EAS at work

Currently, EAS has been tested in several beta releases and pilot deployments. Cyngn deployed its full-stack autonomous driving software, DriveMod, on nine different vehicle form factors that range from stock chasers and stand-on floor scrubbers to 14-seat shuttles and 5-meter-long cargo vehicles. According to Cyngn's research, the deployment of an autonomous vehicle at Global Logistics and Fulfillment's (GLF) Las Vegas warehouse led to a dramatic increase in efficiency, leading to a 64% reduction in human labor costs, when compared to using forklifts, and a 33% increase in productivity when compared to using electric pallet jacks. In addition, the deployed vehicles provided real-time data and reporting on operational analytics, creating a safer working environment for employees and enabling further growth of GLF's client base.

Since autonomous driving has common technological building blocks that remain similar across vehicles and applications, Cyngn's autonomous driving software is scalable and applicable to different vehicle types and use cases. It can be used to retrofit existing fleets or embedded in new vehicles off the assembly line. Hence, EAS has the potential to become a universal autonomous driving solution, delivering autonomy to new vehicles via streamlined hardware/software integration with minimal marginal cost for companies to adopt new vehicles and expand their autonomous fleets across new deployments. This vehicle-agnostic approach enables DriveMod to seamlessly expand to new vehicles at customer sites. In short, almost every industrial vehicle, regardless of its use case, can move autonomously using Cyngn's technology. This technology adaptability enables the Company to incrementally expand into new AV verticals and grow the total addressable market (TAM) from the billions of dollars in the industrial markets to the trillions of dollars that self-driving vehicles can capture across all industries.

Protected IP

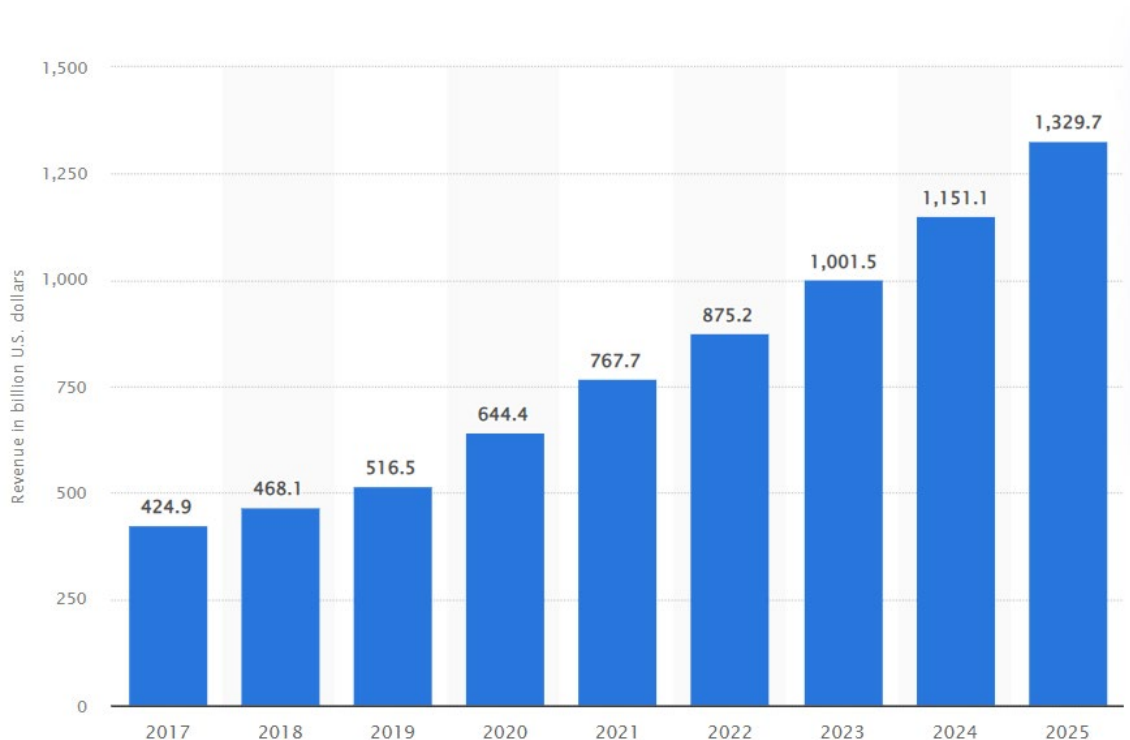
The company has 3 granted patents, 22 pending patent applications, and expects to file additional 4 patent applications by the end of 2022. The granted patents include:

- **Vehicle localization.** The localization of a vehicle is determined using less expensive and computationally robust equipment compared to conventional methods. Localization is determined by estimating the position of a vehicle relative to a map of the environment, and the process thereof includes using a map of the surrounding environment of the vehicle, a model of the motion of the frame of reference of the vehicle (e.g., ego-motion), sensor data from the surrounding environment, and a process to match sensory data to the map. Localization also includes a process to estimate the position based on the sensor data, the motion of the frame of reference of the vehicle, and/or the map. Such methods and systems enable the use of less expensive components while achieving useful results for a variety of applications, such as autonomous vehicles.
- **Vehicle sensor systems.** Vehicle sensor systems include modular sensor kits having one or more pods (e.g., sensor roof pods) and/or one or more bumpers (e.g., sensor bumpers). The sensor roof pods are configured to couple to a vehicle. A sensor roof pod may be positioned atop a vehicle proximate a front of the vehicle, proximate a back of the vehicle, or at any position along the top side of the vehicle being coupled, for example, using a mounting shim or a tripod. The sensor roof pods can include sensors (e.g., LIDAR sensors, cameras, ultrasonic sensors, etc.), processing units, control systems (e.g., temperature and/or environmental control systems), and communication devices (e.g., networking and/or wireless devices).
- **Obstacle detection systems.** Virtual bumpers for autonomous vehicles improve effectiveness and safety as such vehicles are operated. One or more sensor systems having a Lidar sensor and a camera sensor determine the proximity of objects around the vehicle and facilitate identification of the environment around the vehicle. The sensor systems are placed at various locations around the vehicle. The vehicle identifies an object and one or more properties of the identified object using the sensor systems. Based on the identified object and the properties of the object, a virtual bumper may be created for that object. For example, if the object is identified as another vehicle moving with a certain velocity, the vehicle may determine a minimum space to avoid the other vehicle, either by changing direction or reducing the velocity of the vehicle, with the minimum space constituting a virtual bumper.

eCommerce growth is driving AV industrial demand of all kinds

Rapid growth in ecommerce (see Figure 8) over the last decade has increased demand on facility workflows and heavy-duty industrial vehicles to record highs. In the U.S. alone, retail ecommerce rose from \$424.9B in 2017 to \$767.7B in 2021—driving labor shortages and leading facility managers to look for new ways to improve performance in order to meet the demand for both rising volume and quick delivery.

Figure 8 – Cyngn Inc. – U.S. retail eCommerce 2017-2025E



Source: Statista 2022

Developing more efficient workflows starts with careful evaluation of current industrial vehicle utilization. According to Hanzo Logistics, a logistics company specializing in warehouse management, fulfillment, distribution and transportation, three of the biggest issues regarding manufacturing and logistics are:

- **Workers.** According to the U.S. Chamber of Commerce, the latest data shows that we have over 10 million job openings in the U.S.—but only around 6 million unemployed workers. We have a lot of jobs, but not enough workers to fill them. If every unemployed person in the country found a job, we would still have 5 million open jobs.
- **Safety.** Warehouses can be a dangerous place. Accidents in a port or accidents with forklifts, conveyor belts, storage of materials and manual lifting can lead to injury or even death. 25% of all industrial accidents occur at the loading ramp, while forklift accidents result in almost 35,000 serious accidents each year. In addition to the devastating impact on the injured and their families, the accidents at 3PL warehouses also affect the company itself. Warehouse accidents cost 95 million working days each year, resulting in lost productivity, lost employee wages, lower employee morale, and potential OSHA fines.

- Storage capacity. Many warehouses and distribution centers were built based on business needs at the time of construction. Today the eCommerce industry is experiencing rapid growth. One of the effects of this was that there was limited space in warehouses. In addition, rising real estate prices have hampered the expansion of some distribution centers.

However, all of these challenges can be met by redesigning material handling and movement throughout the facility coupled with autonomous vehicles.

Current facility best practices rely heavily on forklifts for both vertical and horizontal movement, but development of new vehicles and vehicle capabilities such as tow tractors and tug systems offer new alternatives with high ROI potential. Using right-sized and task-matched industrial work vehicles at each stage of the operation can minimize the challenges—and risks—created by inefficient, outdated processes, while also infusing new cost efficiencies that can stimulate operational growth.

Forklifts have long dominated vertical material movement in warehouses and manufacturing facilities. Over time, forklift usage has been adopted in many other scenarios that offer limited benefits and, in many cases, have created new challenges and risks to the operator, the product and the entire warehouse operation. For one, forklifts require a high level of training to operate safely. Only experience can help minimize the risk of costly, and sometimes fatal, injuries on the job. Yet a growing skills gap makes acquiring a highly trained and experienced labor force expensive and time consuming.

Valuation and Price Target

Valuation Methodology

We believe CYN is undervalued, and we support that belief with two valuation techniques. For the purposes of determining our price target we use a discounted future earnings model, which we then compare to its valuation relative to peers. The following valuation techniques are being used:

- 1) The discounted value of all future earnings was used for our price target (see Figure 9)
- 2) Valuation relative to peers (see Figure 10)

Discounted Future Earnings – Basis for Price Target

Our 12-month price target of \$10 is based on a discounted earnings model. For valuation purposes, we sum up all future earnings on a GAAP basis and discount them at 10%. We assume the company reaches breakeven in 2026 and grows rapidly until 2034 before growth eventually slows to GDP. Our valuation model is shown in Figure 9 below. Note, this model understates future new products and growth through acquisitions and probably understates the tax benefits, but offsetting that, the earnings never have a down year. The implied share price is \$10.10 which we round down to \$10.

Figure 9 – Cyngn Inc. – Price Target Calculation

Disc. Future Earnings \$10.10		
Year	EPS	Discounted EPS
2022	(\$0.81)	(\$0.81)
2023	(\$0.88)	(\$0.80)
2024	(\$0.66)	(\$0.55)
2025	(\$0.12)	(\$0.09)
2026	\$0.10	\$0.07
2027	\$0.30	\$0.19
Terminal Value:		\$12.09

Source: Litchfield Hills Research LLC

Valuation Relative to Peers

Figure 10 is a summary of our CYN peer comparison. The average Market Cap/Sales for 2023 is 5X. If, two years from now, that were to be the multiple for 2024 and if CYN reached our preliminary revenue target of \$50MM in 2025, the Market Cap would be \$250MM, which implies a price of just over \$7/share. This broadly confirms our view that, along with our discounted earnings model, the shares are undervalued.

Figure 10 – Cyngn Inc. – Valuation of Peers

FactSet Ticker	Company Name	Closing Price	Market Cap \$MM	EV \$MM	2023 Consensus Multiples except Book			
					Market Cap / Sales	EV /Sales	Price to Book	PE
PCAR-US	Paccar Inc	\$85.64	29,779	35,645	1.08	1.29	2.68	10.86
APTV-US	Aptiv PLC	\$96.75	26,213	28,605	1.28	1.41	5.35	18.05
TRMB-US	Trimble Inc	\$59.42	14,716	15,955	3.60	3.94	5.55	18.88
LEA-US	Lear Corporation (US Listing)	\$137.94	8,190	10,847	0.34	0.45	2.35	8.95
AUR-US	Aurora Innovation, Inc.	\$2.88	2,085	2,016	NMF	NMF	3.78	
TSP-US	TuSimple Holdings, Inc.	\$8.39	1,682	771	NMF	NMF	5.99	
INVZ-US	Innoviz Technologies Ltd.	\$5.81	780	593	21.64	15.93	2.85	
AEVA-US	Aeva Technologies, Inc.	\$2.71	590	218	15.02	4.91	3.56	
REE-US	REE Automotive Ltd.	\$1.15	275	83	3.10	1.00	7.04	
VLDR-US	Velodyne Lidar Inc.	\$1.24	272	35	3.54	0.17	3.06	
CPTN-US	Cepton, Inc.	\$1.63	254	243	9.17		1.26	
OUST-US	Ouster, Inc.	\$1.27	231	99	1.99	0.72	3.43	
EMBK-US	Embark Technology, Inc.	\$10.24	191	22	NMF	NMF	NMF	
OTMO-US	Otonomo Technologies Ltd.	\$0.39	52	(143)	1.96		2.17	
GTEC-US	Greenland Technologies Holding Corporation	\$3.28	41	78	0.30	0.58	1.17	4.17
QNGY-US	Quanergy Systems, Inc. Class A	\$0.30	36	17			1.38	
AVERAGE					5.25	3.04	3.44	12.18

We removed metrics and replaced with NMF where the metrics were more than 10x standard deviations from the average to avoid skewing the data

Source: Litchfield Hills Research LLC and FactSet

Strategy

The strategy is to implement phased deployment with partners as the technology proves itself. The process, which is currently in Phase 1, is for fewer than 10 vehicles of a single type at one site. It progresses to 2025, when the target becomes more than 1,000 vehicles of many types at many locations. As Cyngn builds its foundation in industrial AV, the company expects to expand into commercial vehicles.

Financial Projections and Guidance

The company does not provide guidance except to say it expects to see modest revenue in 2022 and 2023. Because there is no clear way to calendarize that assumption, we have chosen to make no revenue projection for 2022 or 2023 until we have a clearer view. The company expects to begin scaled deployments of its Enterprise Autonomy Suite (EAS) in 2024. As of Q2 2022, Cyngn had \$32MM in cash and cash equivalents. We have assumed the estimated costs to prepare the EAS for scaled commercialization are roughly \$18-\$23 million, meaning the company will be well funded until the end of 2023 when EAS should start deployment. We expect a small cash raise in 2024.

Management

Lior Tal, CEO & Chairman of the Board

Previously: Director of international growth and partnerships at Facebook, co-founder and VP of business development at Snaptu (acquired by Facebook), partner at Barzam, Tal, Lerer Attorneys at Law and Patent Attorneys. Held leadership roles at Actimize (acquired by NICE), DiskSites (acquired by EMC), Odigo (acquired by Comverse).

Donald Alvarez, Chief Financial Officer

Previously: VP of Finance of the International Council of Shopping Centers, VP of Finance of QuVa Pharma, Inc., National managing partner, COO and CFO of Tatum, a Randstad Company. Has held several other senior financial and operational roles in both private and public companies.

Biao Ma, Vice President of Engineering

Previously: Software architect for autonomous driving and senior software engineer at Baidu, software engineer at Carnegie Mellon University. MS Computer Science at Carnegie Mellon.

Ben Landen, Vice President of Business Development

Previously: Company's Senior Director of Product & Partnerships, Head of Product & BD at DeepScale (acquired by Tesla), managed \$100M automotive semiconductor product line as Senior Business Manager of Maxim Integrated. MBA at UC Berkeley's Haas School of Business, and BS Electrical Engineering at California Polytechnic University SLO.

Figure 11 – Cyngn Inc. – Comp Table

FactSet Ticker	Company Name	Closing Price	Market Cap \$MM	EV \$MM	2023 Consensus Multiples except Book			
					Market Cap / Sales	EV /Sales	Price to Book	PE
PCAR-US	Paccar Inc	\$85.64	29,779	35,645	1.08	1.29	2.68	10.86
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TRMB-US	Trimble Inc	\$59.42	14,716	15,955	3.60	3.94	5.55	18.88
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GTEC-US	Greenland Technologies Holding Corporation	\$3.28	41	78	0.30	0.58	1.17	4.17
QNGY-US	Quanergy Systems, Inc. Class A	\$0.30	36	17			1.38	
	AVERAGE				<u>5.25</u>	<u>3.04</u>	<u>3.44</u>	<u>12.18</u>

We removed metrics and replaced with NMF where the metrics were more than 10x standard deviations from the average to avoid skewing the data

Source: FactSet and Litchfield Hills Research LLC

Figure 12 – Cyngn Inc. – Income Statement

December ending year	2020A Year	2021A Year		2022E			2022E Year		2023E			2023E Year
			Q1A	Q2A	Q3E	Q4E		Q1E	Q2E	Q3E	Q4E	
Total revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Growth</i>		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cost of Goods	0	0	0	0	0	0	0	0	0	0	0	0
Gross Profit	0	0	0	0	0	0	0	0	0	0	0	0
R&D	5,121	4,990	1,681	2,256	4,700	4,935	13,572	5,083	5,236	5,393	5,554	21,266
G&A	3,253	4,410	2,138	2,357	3,000	3,000	10,495	3,090	3,183	3,278	3,377	12,927
Total Operating Expenses	8,374	9,400	3,819	4,613	7,700	7,935	24,067	8,173	8,418	8,671	8,931	34,193
Operating Income	(8,374)	(9,400)	(3,819)	(4,613)	(7,700)	(7,935)	(24,067)	(8,173)	(8,418)	(8,671)	(8,931)	(34,193)
Operating income %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total Other Items	35	1,601	(0)	1	0	0	1	0	0	0	0	0
Pre-Tax Income	(8,339)	(7,800)	(3,819)	(4,612)	(7,700)	(7,935)	(24,066)	(8,173)	(8,418)	(8,671)	(8,931)	(34,193)
Taxes (benefit)	0	0	0	0	0	0	0	0	0	0	0	0
Tax Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Net Income	(\$8,339)	(\$7,800)	(\$3,819)	(\$4,612)	(\$7,700)	(\$7,935)	(\$24,066)	(\$8,173)	(\$8,418)	(\$8,671)	(\$8,931)	(\$34,193)
EPS, as reported	(\$8.78)	(\$1.33)	(\$0.14)	(\$0.15)	(\$0.25)	(\$0.26)	(\$0.81)	(\$0.26)	(\$0.20)	(\$0.21)	(\$0.21)	(\$0.88)
Diluted Shares Outstanding	950	5,862	26,862	30,706	30,906	31,106	29,895	31,306	41,306	41,506	41,706	38,956

Source: Company reports and Litchfield Hills Research LLC

Figure 13 – Cyngn Inc. – Balance Sheet

December ending year	FY2024E	FY2023E	FY2022E	FY2021A	FY2020A
Balance sheet					
Current Assets					
Cash and S.T.I.	\$10,687	\$3,618	\$18,711	\$21,946	\$6,056
Accounts receivable	50	50	50	50	400
Inventories	3,000	2,000	1,000	525	49
Other assets	0	0	0	0	0
Total Current Assets	13,737	5,668	19,761	22,521	6,505
PP&E	2,000	1,000	500	103	134
Intangibles					34
Long term assets	200	200	50	31	0
Total Assets	\$16,687	\$7,518	\$20,311	\$22,655	\$6,673
Current Liabilities					
Accounts payable	\$8,000	\$1,000	\$200	\$112	\$73
Accrued expenses and other current liabilities	200	100	0	0	0
Due to related parties					
Other current liabilities	2,000	1,000	500	295	307
Total current liabilities	10,200	2,100	700	407	380
Note payable, Paycheck Protection Program	0	0	0	0	695
Other long-term	0	0	0	0	0
Total Liabilities	10,200	2,100	700	407	1,075
Stockholders' Equity					
Preferred stock	0	0	0	0	0
Common stock	170	170	170	170	0
Additional paid-in-capital	210,000	180,000	160,000	138,570	114,292
Retained earnings	(203,683)	(174,753)	(140,560)	(116,494)	(108,694)
Accumulated other comp. and NC Interest	0	0	0	0	0
Total stockholders' equity	6,487	5,418	19,611	22,248	5,598
Total Liabilities and equity	\$16,687	\$7,518	\$20,311	\$22,655	\$6,673

Source: Company reports and Litchfield Hills Research LLC

Figure 14 – Cyngn Inc. – Cash Flow

	2024E	2023E	2022E	2021A
Net Income / (loss)	(28,931)	(34,193)	(\$24,066)	(7,800)
Restricted cash	0	0	0	350
Prepaid expenses and other current assets	(1,000)	(1,000)	(475)	(476)
Other	0	0	0	0
PP&E	(1,000)	(500)	(397)	31
Intangibles	0	(150)	(19)	3
Long term assets	(100)	(650)	0	0
Accounts payable	7,000	800	88	39
Accrued expenses and other current liabilities	100	100	0	0
Due to related parties	0	0	0	0
Other current liabilities	1,000	500	205	(12)
Note payable, Paycheck Protection Program	0	0	0	(695)
Other long-term	0	0	0	0
Preferred stock	0	0	0	0
Common stock	0	0	0	170
Additional paid-in-capital	30,000	20,000	21,430	24,279
Accumulated other comp. and NC Interest	0	0	0	0
Other				
Total Cash Flow	7,069	(15,093)	(\$3,235)	15,890

Source: Litchfield Hills Research LLC

Disclosures:

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We, the Litchfield Hills Research Department, hereby certify that the views expressed in this research report accurately reflect our personal views about the subject company and the underlying securities.

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Cyngn Inc.

CYN-US - Buy \$10 PT

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